GP1725

TME-01-001

September 12, 2001

To: Commissioner of Patents and Trademarks
Washington, D.C. 20231

Fr: George O. Saile, Reg. No. 19,572
20 McIntosh Drive
Poughkeepsie, N.Y. 12603

#2 Prior Art mail 6/17/02

Subject: Serial No. 09/898,124 07/05/01

Quanbo Zou, Uppili Sridhar,

MINIATURIZED MULTI-CHAMBER THERMAL CYCLER FOR INDEPENDENT THERMAL MULTIPLEXING

Grp. Art Unit: 1725

INFORMATION DISCLOSURE STATEMENT

Enclosed is Form PTO-1449, Information Disclosure Citation In An Application.

The following Patents and/or Publications are submitted to comply with the duty of disclosure under CFR 1.97-1.99 and 37 CFR 1.56. Copies of each document is included herewith.

U.S. Patent 5,939,312 to Baier et al., "Miniaturized Multichamber Thermocycler", describes a miniaturized multi-chamber thermal cycler.

The following three U.S. Patents all discuss early work on multi-chamber thermal cyclers fabricated by silicon etching:

1) U.S. Patent 5,639,423 to Northrup et al., "Microfabricated Reactor."

2) U.S. Patent 5,646,039 to Northrup et al., "Microfabricated Reactor."

3) U.S. Patent 5,674,742 to Northrup et al., "Microfabricated Reactor."

Micro-fabricated PCR reaction chambers (or thermal Cyclers) have been reported in the technical literature by a number of experimenters, including:

1) Adam T. Woolley, et al., (UC Berkeley), "Functional Integration of PCR Amplification and Capillary Electrophoresis in a Microfabricated DNA Analysis Device," Analytical Chemistry, Vol. 68, pp. 4081-4086.

2) M. Allen Northrup, et al., (Lawrence Livermore National Lab, UC Berkeley, Roche Molecular Systems), "DNA Amplification with a microfabricated reaction Chamber", 7th Intl. conf. Solid-State Sensors and Actuators, pp. 924-926.

3) S. Poser, et al., "Chip Elements for Fast Thermocycling", Eurosensors X, Leuven, Belgium, Sept. 1996, pp. 1197-1199.

4) Ajit M. Chaudhari, et al., (Stanford Univ. and PE Applied Biosystems), "Transient Liquid Crystal Thermometry of Microfabricated PCR Vessel Arrays", J. Microelectromech. Systems, Vol. 7, No. 4, 1998, pp. 345-355.

Sincerely,

Stephen B. Ackerman,
Reg. No. 37761

Form PTO-1449

INFORMATION DISCLOSURE CITATION IN AN APPLICATION

(Use several sheets if necessary)

Docket Number (Optional)	Application Number
IME-[redacted]-001	09/898,124
Applicant: Quanbo Zou et al.	
Filing Date: 07/05/01	Group Art Unit: 1725

U. S. PATENT DOCUMENTS

Examiner	Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate
	5939312	8/17/99	Baier et al.	435	287.2	12/26/96
	5639423	6/17/97	Northrup et al.	122	50	8/31/92
	5646039	7/8/97	Northrup et al.	435	287.2	6/6/95
	5747742	10/7/97	Northrup et al.	435	286.5	6/6/95

FOREIGN PATENT DOCUMENTS

	Document Number	Date	Country	Class	Subclass	Translation YES	Translation NO

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

Adam T. Woolley, et al., (UC Berkeley), "Functional Integration of PCR Amplification and Capillary Electrophoresis in a Microfabricated DNA Analysis Device," Analytical Chemistry, Vol. 68, pp. 4081-4086.

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EXAMINER	DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.

Form PTO-1449

OIPE SEP 17 2001 PATENT & TRADEMARK OFFICE U.S.

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IME-0[illegible]001	09/898,124
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U. S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE

RECEIVED JUN 06 2002 TECH CENTER 1600/2900

RECEIVED MAY 15 2002 TC 1700

RECEIVED SEP 19 2001 TC 1700

FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation YES	Translation NO

RECEIVED JUN 04 2002 TC 1700

RECEIVED MAY 07 2002 TC 1700

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

M. Allen Northrup, et al, (Lawrence Livermore National Lab, UC Berkeley, Roche Molecular Systems), "DNA Amplification with a microfabricated reaction Chamber," 7th Intl. conf. Solid-State Sensors and Actuators, pp. 924-926.

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